Department of Public Works
Water Division
397 Lowell St.
Andover, MA 01810-4416

POSTAL CUSTOMER
ANDOVER, MASSACHUSETTS

Andover gets high marks

The Andover Water Department was named 2009 Utility of the Year by new England Water Works Association (NEWWA), a Holliston, MA-based, not-for-profit organization of water works professionals. The award recognized the utility for making significant improvements to its water system infrastructure, and for providing outstanding customer service, staff training and operations to further protect public health of the consumers it serves. NEWWA is one of the oldest professional societies in the country, and it is an honor for the town.

What the EPA Says About Drinking Water

Contaminants and Health Risks

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791).

Other Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons—such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants—can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC (Center for Disease Control) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline.

Contaminants

The sources of drinking water (both tap and bottled) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animal or human activity. Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- **Organic contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants**, which can be either naturally occurring or the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, Mass DEP and US EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) and the Massachusetts Department of Public Health (DPH) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

inside >>>

2009

Water Quality Report **PSW ID # 3009000** **Town of Andover, MA DPW—Water Division**

the **Value** *of* H_2O

Where Your Water Comes From

Andover's drinking water supply is derived from a combination of three sources: Haggetts Pond, Fish Brook and the Merrimack River. The town's water treatment plant, located on Lowell Street, purifies water pumped directly from Haggetts Pond. Fish Brook and Merrimack River water is pumped to Haggetts Pond to supplement the natural amount available from the watershed. About one-half of the town's yearly demand is pumped from these river sources. DEP assessed Andover's sources and released a Source Water Assessment and Protection report that is available at www.mass.gov/dep/water/drinking swapreps.htm

Andover Water Treatment Plant

Go ahead, think about it

Do a little comparative shopping...

On average, a gallon of tap water in the United States costs a fraction of a penny. You simply can't find a better deal for a commodity that means so much to your daily life. Compare that with the cost of other liquids you might use on a daily basis like milk, gasoline, perfume, or coffee.

How often do you think about your tap water? If you're like most, probably not often. And yet tap water offers so much. At a fraction of a penny per gallon, your tap water provides public health and fire protection, offers economic development, and gives quality and convenience to life. Tap water is so intricately part of our lives that we can hardly imagine a day without it. Without tap water, how would we rinse our produce, clean clothes, water landscapes, or wash our cars? Where would we shower? Any measure of a successful society—low mortality rates, economic diversity, productivity, public safety—is in some way related to clean water. Safe drinking water is essential to this community, and the Andover Water Department is committed to providing it.

One gallon of tap water costs a fraction of 1 cent

This consumer confidence report is the 12th publication to be issued under the Environmental Protection Agency (EPA) regulations requiring annual notification to all consumers about local drinking water sources and water quality information. It is also being delivered to the Andover Board of Health, the Massachusetts Department of Public Health, and Massachusetts Department of Environmental Protection (DEP). Additional copies are available at the library, town hall, and water treatment plant. It summarizes Andover's drinking water sources, monitoring information, and health-related water issues. Costs to produce and deliver this required information to you was kept at a minimum: 10 cents per brochure for print and 24 cents per brochure for delivery.

Call Cyndi Vaughn at 978-623-8350 ext. 523 for more information or visit the website at www.andoverma/dpw.

How to Read the Following Tables

The following tables present the results of our most recent water quality testing during the 2009 calendar year, unless otherwise noted. All of the regulated drinking water contaminants that were detected in the water are listed in the tables that follow. The presence of contaminants in the water does not indicate that the water poses a health risk. Any potential health risk associated with a contaminant is clearly explained. All testing was done in accordance with EPA and MA DEP drinking water regulations. The following definitions have been provided to help you better understand Andover's water quality information.

Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants (ex. chlorine, chloramines, chlorine dioxide).

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers a treatment or other requirements that a water system must follow.

Parts Per Million (ppm), Parts Per Billion (ppb)
These units are used to describe the levels of detected contaminants. One ppm is comparable to 1 cent in $10,000 dollars; one ppb is comparable to 1 cent in $10,000,000 dollars.

EPA = U.S. Environmental Protection Agency
DEP = Massachusetts Department of Environmental Protection (MA DEP)
CDC = U.S. Center for Disease Control and Prevention

Sampling Results

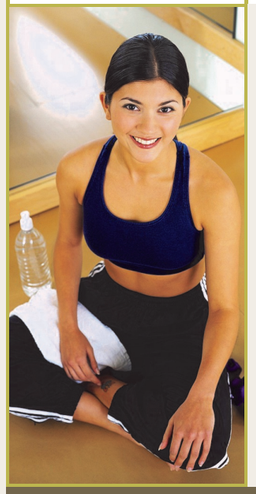
During 2009, thousands of water samples were taken to monitor for the presence of any biological, inorganic, or organic contaminants. The following tables show only those contaminants that were detected in the water at some level. Although all of the results listed here are under the Maximum Contaminant Levels (MCL), we feel it is important that you know exactly what was detected and how much of the substance was present in the water. The state allows us to monitor for certain substances less than once per year because the concentrations of these substance do not change frequently. In these cases, the most recent sample data are included along with the year in which the sample was taken.

TABLE OF SUBSTANCES (UNIT OF MEASURE PPM EXCEPT IF NOTED OTHERWISE)

Parameter	Maximum Amount Detected	Range of Detection	Maximum Contaminant Level (MCL)	Maximum Contaminant Level Goal (MCLG)	Source of Contamination
Barium	0.012	N/A	2	2	Erosion of natural deposits
Fluoride	1.41	0.80—1.41	4	4	Water additive that promotes strong teeth
Manganese	0.014	N/A	N/A	0.05 (EPA guideline)	Naturally present in the environment
Nitrate	0.35	N/A	10	10	Runoff from fertilizer; leaching from septic tanks; sewage; erosion of natural deposits
Sodium	67	47.2—67	N/A	20 (DEP guideline)	Naturally present in the environment; runoff from roads and highways; water treatment process residual
Sulfate	18	N/A	N/A	250 (EPA guideline)	Naturally present in the environment; water treatment process residual
Turbidity (ntu)	0.23	0.02—0.23	TT=1.0 max TT<0.3 95% of time	N/A	Fine silts and soil runoff
			Maximum Residual Disinfectant Level (MRDL)	**Maximum Residual Disinfectant Level Goal (MRDLG)**	
Chlorine	0.52	0.01—0.52	4	4	Water additive used to control microbes

TABLE OF SUBSTANCES (UNIT OF MEASURE)

Parameter	Maximum Amount Detected	Range of Detection	Maximum Contaminant Level (MCL)	Maximum Contaminant Level Goal (MCLG)	Source of Contamination
Giardia lamblia (Oocysts/l)	0.19	0—0.19	TT= 99.9% removal/inactivation	0	Human and animal waste
Haloacetic Acids/HAA5s (ppb)	8	ND—8	60	N/A	By-product of chlorination
Heterotrophic Plate Count (cfu/ml))	330	0—330	500	N/A	Naturally present in the environment
Total Coliform (colonies/ml)	<5%	0—<5%	< 5% of samples positive within a month	0	Naturally present in environment; human and animal waste
Total Organic Carbon (ppm)	2.626	1.906-2.626	TT=45% removal	N/A	Naturally present in the environment
Total Trihalomethanes/ TTHM (ppb)	38	11.3—38	80	N/A	By-product of chlorination



Water is the original health drink. With no calories, no cholesterol, no caffeine and no fats or sugars, every glass of water you drink nourishes your body and mind.

Clean Water ~ Healthy You

Water increases your physical and mental performance.
Water helps flush your body of toxins and wastes.
Water improves and rejuvenates skin.
Water reduces fatigue.
Water lubricates and cushions joints and muscles.
Water aids your circulation.

Nutrition Facts
Per Glass of Water

Amount	% Daily Value
Calories 0	
Fat 0 g	0%
Carbohydrate 0 g	0%
Protein 0 g	0%

Not a significant source of saturated fat, trans fat, cholestrol, sodium, fiber, sugars, vitamin A, C, calcium or iron.

LEAD AND COPPER (UNIT OF MEASURE)

Parameter	90th Percentile Value	Range of Detection	Maximum Contaminant Level (MCL)	Maximum Contaminant Level Goal (MCLG)	# of Sites Above AL	Source of Contamination
Lead (ppb)	8	<1—14	15 (action level)	Zero	Zero	Corrosion of household plumbing
Copper (ppm)	0.066	<0.003—0.106	1.3 (action level)	1.3	Zero	Corrosion of household plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Andover Water Department is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4791) or at http://www.epa.gov/safewater/lead. The values reported in the above table represent the highest concentration found in 90% of the homes sampled. Water tests conducted during the summer of 2007 determined the level of lead in 90% of the homes tested to be less than 8 ppb, and the level of copper in 90% of the homes tested to be less than 0.066 ppm. These levels are well below the EPA's action levels requiring additional corrective measures. The next round of lead and copper testing is scheduled for the summer of 2010.

PUBLIC NOTIFICATION: *We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. Between 1/1/09 & 3/31/09, we did not monitor or test for nitrate and therefore cannot be sure of the quality of our drinking water during that time. Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail. Corrective action was taken. Nitrate was tested on 4/27/09 and satisfactorily met drinking water standards.*